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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,304	07/01/2003	Michael Andrew Fischer	050337-1200 (05CXT0059WL)	5599
24504 7590 04/25/2007 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			EXAMINER DAVENPORT, MON CHERI S	
			ART UNIT	PAPER NUMBER
			2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/611,304	Applicant(s) FISCHER ET AL.	
	Examiner Mon Cheri S. Davenport	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/13/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

This Action is in response to the Application filed July 1, 2003.

Information Disclosure Statement

The references listed in the Information Disclosure Statement file on September 13, 2004 have been considered by the examiner (see attached PTO-1449 form or PTO/SB/08A and 08B forms).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-20** rejected under 35 U.S.C. 102(e) as being anticipated by Raleigh et al. (US patent Number 6,463, 096).

Regarding **Claim 1** Raleigh et al. discloses a method comprising:

storing a description of a first frame wherein said description comprises (**see column 6, lines 12-16, data extracted from the received MAC packets included MAP**);

(1) a frame length (**some of the extracted data includes the MA, see column 6, line 14**); and

(2) a first transmission rate(data rates) (**see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.**);

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receiving a first portion (see figure 4a, section 402, RA frame) of said first frame(see figure 4a, Frame A, B, C, D or E) wherein the length of said first portion is less than said frame length and is based on said first transmission rate(2Mbps)(**see column 6, lines 42-44, a frame is here is understood to be a unit of time for which access to the common transmission medium may be assigned to one or more CPEs**);

queuing said first portion of said first frame(**see column 6, lines 28-30, processor receives packets from the IP router that are to directed to the hub and queues them**);

transmitting said first portion of said first frame at said first transmission rate into a shared-communications channel(see **column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in an A frame 15 CPEs are scheduled to transmit each 2Mbps**) ; and

receiving a second portion(see figure 4a, section CPE1) of said first frame after said transmission of said first portion has started (see **column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in an A frame 15 CPEs are scheduled to transmit each 2 Mbps**).

Regarding **claim 2** Raleigh et al. discloses everything claimed as applied above (see claim 1). In addition the method includes:

wherein said description further comprises a second transmission rate (see **col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate**) and at least one form of modulation (see **column 6, lines 46-48, any known MAC scheme may be used to control access to the medium in this frame such as CSMA, CSMA/CD etc. When RA frame includes an OFDM burst**).

Regarding **claim 3** Raleigh et al. discloses everything claimed as applied above (see claim 2). In addition the method includes:

wherein said at least one form of modulation comprises orthogonal frequency division multiplexing(see **column 6, lines 46-48, any known MAC scheme may be used to control access to the medium in this frame such as CSMA, CSMA/CD etc. When RA frame includes an OFDM burst**).

Regarding **claim 4** Raleigh et al. discloses everything claimed as applied above (see claim 1). In addition the method includes:

further comprising queuing said second portion of said first frame wherein the length of said second portion is less than said frame length, and is based on said first transmission rate and the time required to receive said second portion (see **column 6, lines 28-30, processor receives packets from the IP router that are to directed to the hub and queues them**).

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Regarding **claim 5** Raleigh et al. an apparatus comprising(see figure 3):

an interface controller for:

(1) receiving a first portion (see figure 4a, section 402, RA frame) of a first frame (see figure 4a, Frame A, B, C, D or E) **see figure 3, section 318, MAC processor, see col 6, line 9-16, some of the data is extracted including the MAP))** ; and

(2) receiving a second portion (see figure 4a, section CPE1) of a first frame (see **figure 3, section 324, transmit priority processor, see col 6, lines 28-29, processor receives packets from the IP router that are to be directed to the hub**) ;

a memory for(see figure 3):

(1) storing a description of said first frame wherein said description comprises a frame length and a first transmission rate(**see figure 3, section 318, MAC processor, see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.**); and

(2) queuing said first portion of said first frame wherein the size of said queue is based on said first transmission rate and the time required to receive said first portion (**see figure 4a, see col 6, lines 36-38, depicts a MAP frame with data rate and center frequency assignments**) ; and

a transmitter for transmitting said first portion of said first frame at said first transmission rate into a shared-communications channel (**see figure 3, section 314, radio converter**).

Regarding **claim 6** Raleigh et al. discloses everything claimed as applied above (see claim 5). In addition the apparatus includes:

wherein said description further comprises a second transmission rate(**see col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate**) and at least one form of modulation(see **col 6, line 46-48, ant known MAC scheme may be used such as CSMA, When RA frame includes OFDM**)

Regarding **claim 7** Raleigh et al. discloses everything claimed as applied above (see claim 6). In addition the apparatus includes:

wherein said at least one form of modulation comprises orthogonal frequency division multiplexing (**see col 6, line 46-48, ant known MAC scheme may be used such as CSMA, When RA frame includes OFDM**) .

Regarding **claim 8** Raleigh et al. discloses everything claimed as applied above (see claim 5). In addition the apparatus includes:

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wherein said memory is also for queuing said second portion of said first frame wherein the length of said second portion is less than said frame length, and is based on said first transmission rate and the time required to receive said second portion (**see col 6, lines 41-46, a frame is understood to be a unit of time for which access to the common transmission medium may be assigned to one or more CPEs, see figure 4a).**

Regarding **claim 9** Raleigh et al. discloses everything claimed as applied above (see claim 5). In addition the apparatus includes:

wherein said transmitter operates in accordance with the IEEE 802.11 air interface protocol (**see col 2, lines 63-65, the system and method is applicable to both wired and wireless transmission media).**

Regarding **Claim 10** Raleigh et al. discloses a method comprising:

storing a first description wherein said first description comprises (**see column 6, lines 12-16, data extracted from the received MAC packets included MAP**) :

1) a first frame length (**some of the extracted data includes the MA, see column 6, line 14**); and

(2) a first transmission rate (**see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.**);

transmitting a queued portion of a first frame at said first transmission rate into a shared-communications channel (**see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in a A frame 15 CPEs are scheduled to transmit each 2Mbps**);

removing (transmitting) said queued portion of said first frame wherein said removal is based on said first frame length(**see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in a A frame 15 CPEs are scheduled to transmit each 2Mbps**);

storing a second description wherein said second description comprises (**see column 6, lines 12-16, data extracted from the received MAC packets included MAP**):

(1) a second frame length(**some of the extracted data includes the MA, see column 6, line 14**); and

(2) a second transmission rate (data rates) (**see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries**

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instructions assigning transmission center frequencies, data rates and frame times.) (see col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate);

queuing a first portion of a second frame wherein the length of said first portion is less than said second frame length and is based on said first transmission rate **see column 6, lines 28-30, processor receives packets from the IP router that are to directed to the hub and queues them);** and

transmitting said first portion of said second frame at said second transmission rate into said shared-communications channel **(see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in a A frame 15 CPEs are scheduled to transmit each 2Mbps).**

Regarding claim 11 Raleigh et al. discloses everything claimed as applied above (see claim 10). In addition the method includes:

wherein said first transmission rate and said second transmission rate are different **(see col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate).**

Regarding claim 12 Raleigh et al. discloses everything claimed as applied above (see claim 10). In addition the method includes:

further comprising queuing a second portion of said second frame wherein the length of said second portion is less than said second frame length and is based on said second transmission rate **(see column 7, lines 4-7, in a E frame a single CPE9 occupies the entire upstream spectrum. Thus may CPEs may simultaneously transmit as low data rate source or one CPE may transmit at a high data rate).**

Regarding claim 13 Raleigh et al. discloses an apparatus comprising (see figure 3):

a memory for:

(1) storing a first description wherein said first description comprises a first frame length and a first transmission rate **(see figure 3, section 318, MAC processor, see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.);**

(2) storing a second description wherein said second description comprises a second frame length and a second transmission rate **(see figure 3, section 318, MAC processor, see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.);** and

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(3) queuing a first portion of a second frame wherein the length of said first portion is less than said second frame length and is based on said first transmission rate **(see figure 4a, see col 6, lines 36-38, depicts a MAP frame with data rate and center frequency assignments)**;

a transmitter for **(see figure 3, section 314, radio converter)**:

(1) transmitting a queued portion of a first frame at said first transmission rate into a shared-communications channel **(see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in an A frame 15 CPEs are scheduled to transmit each 2Mbps)**; and

(2) transmitting said first portion of said second frame at said second transmission rate into said shared-communications channel **(see column 7, lines 4-7, in a E frame a single CPE9 occupies the entire upstream spectrum. Thus may CPEs may simultaneously transmit as low data rate source or one CPE may transmit at a high data rate)**; and

a processor for removing(transmitting) said first description and said queued portion of said first frame wherein said removal is based on said first frame length **(see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in a A frame 15 CPEs are scheduled to transmit each 2Mbps)**.

Regarding **claim 14** Raleigh et al. discloses everything claimed as applied above (see claim 13). In addition the apparatus includes:

wherein said first transmission rate and said second transmission rate are different **(see col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate)**.

Regarding **claim 15** Raleigh et al. discloses everything claimed as applied above (see claim 13). In addition the apparatus includes:

wherein said memory is also for queuing a second portion of said second frame wherein the length of said second portion is less than said second frame length **(see column 6, lines 28-30, processor receives packets from the IP router that are to directed to the hub and queues them)** and is based on said second transmission rate **(see column 7, lines 4-7, in a E frame a single CPE9 occupies the entire upstream spectrum. Thus may CPEs may simultaneously transmit as low data rate source or one CPE may transmit at a high data rate)**.

Regarding **claim 16** Raleigh et al. discloses everything claimed as applied above (see claim 13). In addition the apparatus includes:

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wherein said transmitter operates in accordance with the IEEE 802.11 air interface protocol (**see col 2, lines 63-65, the system and method is applicable to both wired and wireless transmission media**).

Regarding **claim 17** Raleigh et al. discloses a method comprising:

storing a first description of a first frame wherein said first description comprises (**see column 6, lines 12-16, data extracted from the received MAC packets included MAP**):

(1) a first frame length(**some of the extracted data includes the MA, see column 6, line 14**);

(2) a first transmission rate(data rates) (**see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.**); and

(3) a first class of service with which said first frame is associated(**see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.**);

queuing a first portion of said first frame in a first queue (**see column 6, lines 28-30, processor receives packets from the IP router that are to directed to the hub and queues them**) wherein said first portion of said first frame comprises m octets, wherein m is a positive integer, and wherein the value of m is based on said first transmission rate (**see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in an A frame 15 CPEs are scheduled to transmit each 2 Mbps**);

transmitting said first portion of said first frame at said first transmission rate into a shared-communications channel(**see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in an A frame 15 CPEs are scheduled to transmit each 2 Mbps, see figure 4a**);

receiving a second portion of said first frame after said transmission of said first portion has started(**see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in an A frame 15 CPEs are scheduled to transmit each 2 Mbps**);

storing a second description of a second frame after said storing of said first description wherein said second description comprises(**see column 6, lines 12-16, data extracted from the received MAC packets included MAP**):

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(1) a second frame length (*some of the extracted data includes the MA, see column 6, line 14*);

(2) a second transmission rate (data rates) (*see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.*) (*see col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate*) ; and

(3) said second class of service with which said second frame is associated(*see column 6, lines 12-16, data extracted from the received MAC packets included MAP which carries instructions assigning transmission center frequencies, data rates and frame times.*);

queuing a portion of said second frame(*see column 6, lines 28-30, processor receives packets from the IP router that are to directed to the hub and queues them*) wherein said portion of said second frame comprises n octets, wherein n is a positive integer, and wherein the value of n is based on said second transmission rate(*see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in an A frame 15 CPEs are scheduled to transmit each 2 Mbps*); and

transmitting said portion of said second frame at said second transmission rate(*see col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate*) into said shared-communications channel(*see column 6, lines 44-46, a request access (RA) frame is where individual CPEs may request to the common transmission medium, see column 6, line 63-64, in an A frame 15 CPEs are scheduled to transmit each 2 Mbps, see figure 4a*).

Regarding **claim 18** Raleigh et al. discloses everything claimed as applied above (see claim 17). In addition the method includes:

wherein said first transmission rate and said second transmission rate are different (*see col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate*).

Regarding **claim 19** Raleigh et al. discloses everything claimed as applied above (see claim 17). In addition the method includes:

further comprising queuing a second portion of said second frame wherein the length of said second portion is less than said second frame length and is based on said second transmission rate (*see col 6, lines 58-60, CPE may transmit upstream at a given frame at either a 2Mbps, a 30Mbps data rate*).

Regarding **claim 20** Raleigh et al. discloses everything claimed as applied above (see claim 17). In addition the method includes:

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wherein said transmitting is performed in accordance with the IEEE 802.11 air interface protocol (***see col 2, lines 63-65, the system and method is applicable to both wired and wireless transmission media***).

Citation of Pertinent Prior Art

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takagi (US Patent application Publication 2001/0036154) see abstract .

Matsuoka et al. (US Patent Application Publication 2002/0009082) see abstract.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mon Cheri S. Davenport whose telephone number is 571-270-1803. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Md/md
April 11, 2007


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